

A Descriptive Study of Various Causes and Treatment Modalities of Mastalgia in Females of all Age Groups in Guru Nanak Dev Hospital, Amritsar

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ABSTRACT

Background: Mastalgia or Breast pain, is a common symptom which women may experience at different time in their lives. Many women worry that pain in their breasts is caused by breast cancer. Breast cancer rarely causes breast pain, however a thorough history and clinical examination by clinician appreciates it. **Methods:** A descriptive study was carried out in department of general surgery, Govt. Medical College in Guru Nanak Dev Hospital, Amritsar. There are 500 cases of mastalgia collected in Guru Nanak Dev Hospital and diagnosis was made on basis of clinical history and local examination of both breasts. All the quadrants of the breast were examined. Treatment of each patient was done as per the diagnosis. **Results:** Among 500 Patients 449 patients had cyclical mastalgia whereas 51 patients had non cyclical mastalgia. **Conclusion:** In our study 89.8% of the patients experienced cyclical mastalgia and 10.2% non cyclical mastalgia.

Keywords: Breast, Mastalgia.

INTRODUCTION

Mastalgia or breast pain is a common symptom which women may experience at different times in their lives.^[1] In western society mastalgia or breast pain without underlying pathology is a common complaint that was seen upto 70% of women in their life time. Interestingly, it is less common in Asian cultures, affecting as few as 5%.^[2] Although studies revealed that only 0.8% were positive for cancer and other studies showed mastalgia as not a primary presentation of breast cancer.^[3] The Etiology of mastalgia is not well understood. Some studies show hyperresponsiveness of projecting to stimulation by thyrotropin releasing hormone while others have suggested elevated level of abnormalities of lipid metabolism.^[4] There are two main types of mastalgia: cyclical and non cyclical. Cyclical mastalgia occurs in premenopausal women and typically affects the younger women. It is often described as dull, heavy and achy, usually settles during pregnancy and menopause.^[5] Non cyclical breast pain is not related to menstrual cycle. There are numbers of causes

including infection and benign breast lumps. Sometimes pain originates from the breast tissue in one or both breasts in the absence of any physical cause. Non cyclical breast pain is not associated with the menstrual cycle and it can be either constant or intermittent. (Comes and goes).^[6]

MATERIALS AND METHODS

A descriptive study was done in department of general surgery, Govt. Medical College, Guru Nanak Dev Hospital, Amritsar. There are 500 cases of mastalgia collected and diagnosis was made on the basis of clinical history taking and local examination of breasts. The study was based upon the patients attending surgical OPD with breast pain. Treatment of each patient was done as per diagnosis. The patient managed as outpatient basis was followed up in successive OPDs and follow up to three months. All the patients were given pain killer evening primrose oil 1-5gm per day and vitamin E 1200 IU per day.

RESULTS

In our study among 500 patients 449 patients had cyclical mastalgia and 51 patients had non cyclical mastalgia. Among non cyclical mastalgia 12 patients had breast abscess, 12 patients had breast engorgement, 11 patients had history of trauma, 10

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patients had acute mastitis, 4 patients had galactocoele and 2 patients had breast tuberculosis.

DISCUSSION

Mastalgia or breast pain is commonly encountered by women. It is thought to present 2/3rd of the women and is most common in women between the ages of 30-50. Breast pain may due to normal cyclical changes in hormonal levels due to certain diseases. Cyclical hormone changes are the most common cause of breast pain.^[7]

Makumbi T et al,^[8] done a study to determine the prevalence and describe factors associated with mastalgia among women attending a tertiary hospital in sub Saharan Africa.

Mastalgia was defined as self reported breast pain (unilateral or bilateral) for a period not less than two months. Out of the 1048 women who presented to the breast clinic during the study period, 168 (16%) were diagnosed with mastalgia in the absence of breast cancer.

51 patients among 500 patients are of non cyclical mastalgia in our study. Non cyclical mastalgia is not related to natural period. There are various causes of non cyclical mastalgia like acute mastitis, breast abscess, breast trauma, breast tuberculosis and galactocoele etc. in our study.

Study conducted by Zarshenas M et al,^[9] found that the incidence of acute mastitis in female 20% which causes non cyclical mastalgia in our study there are 10 cases acute mastitis which is 19.6% of the total 500 cases. Patients treated with pain killer and antibiotics.

Amir LH et al,^[10] reported the incidence of breast abscess 11% mostly among young females. In our studies there are 12 cases of breast abscess. All patients were treated with pain killer antibiotics and incision and drainage, dressing later on. Patients were given paracetamol or diclofenace according to severity of pain. Alongwith evening primose oil for period of 6 weeks. During followup after 3-6 months pain got subsided patient were well clinically and there are no complaints. All the patients were tolerated the treatment.

Farideh Vaziriet,^[11] (2014) this study aimed at comparing the effects of flaxseed diet and omega-3 fatty acids supplement on treatment of cyclical mastalgia. In this study, 61, 60, and 60 women, respectively, received flaxseed as bread, omega-3 fatty acids as pearl, and wheat bread as their diet for two menstrual cycles. At the baseline cycle and end of both interventional cycles, intensity of mastalgia was measured using visual analogue scale. Analysis of covariance showed a significant difference among the three groups regarding the mean intensity of cyclical mastalgia in the first and second cycles of the interventions ($P < 0.001$). Also, repeated measures analysis of covariance with adjustment of two variables of age and mastalgia intensity of the baseline cycle demonstrated that flaxseed bread was

more effective compared to omega-3 and wheat bread ($P < 0.001$). The results of this study demonstrated that flaxseed bread diet was an effective approach in decreasing cyclical mastalgia and could be prescribed to women as a simple treatment with few complications.

Jain BK et al,^[12] (2015) In this study, eligible patients, who had mastalgia for more than 3 months, were randomized into two groups. Group A received centchroman 30 mg daily and Group B received tamoxifen 10 mg daily. Treatment was continued for a total of 12 weeks; thereafter, patients were followed for another 12 weeks without medication to assess the continuum of relief. Pain severity was measured with VAS score. Patients were considered to have complete pain relief if their VAS score decreased to 3 or less. Patients, in both the groups, showed gradual improvement in mastalgia with passage of time up to 12 weeks. Following cessation of treatment at 12 weeks, partial relapse of pain was observed at 24 weeks. There was no significant difference between Group A and Group B in terms of mean VAS Score and proportion of women reporting pain relief at 4, 8, 12, and 24 weeks. Fifteen patients in Group A had side effects namely dizziness, menstrual irregularities and development of ovarian cysts. There was no side effect noted in group B.

Raghunath S et al,^[13] (2015) in their study on young females found that the prevalence of mastalgia was 47.33% (354 out of 748), of which 88.70% (314) had cyclical mastalgia (CM) and 9.89% (35) had acyclic mastalgia (ACM). Students who had low body mass index (BMI) had higher risk for mastalgia as compared to those with normal BMI [relative risk (RR) = 1.063] or high BMI (RR = 1.685). Moderately stressed students were at higher (RR = 0.771) risk of mastalgia compared to those with low stress. Students with high stress levels were also at a higher (RR = 0.787) risk compared to those with low stress. The prevalence of mastalgia was 47.33% among 748 young females from four nursing colleges in Karnataka, India.

Gupta P et al,^[14] (2016) studied the role of tamoxifen and danazol in mastalgia. All patients coming to OPD in first 15 days of months were given danazol 200 mg/day for a period of two months. All those coming in next half were treated with tamoxifen 20 mg/day for two months. Danazol when used is effective in achieving complete or partial response in 70.83% of cyclic mastalgia when given in dose of 200 mg/day for two months. However 29.17% patients did not respond to it. Tamoxifen when used is effective in achieving complete or partial response in 66.67% of cyclical mastalgia when given in dose of 20 mg/day for two months. However 33.33% patients did not respond to it. This study showed danazol treatment was more effective in treatment of cyclic mastalgia. Non cyclic mastalgia was difficult type to be cured by drug therapy.

Mishra RP et al,^[15] (2016) studied the efficacy of vitamin E in improving pain severity in cyclical mastalgia in adolescent women. In a prospective trial of 194 patients suffering from cyclic mastalgia were advised 400 IU of vitamin E daily for 2 month. Severity of breast pain was evaluated by the Cardiff breast pain score during one menstrual cycle before and two menstrual cycle after the intervention. There was significant difference in the mean severity of cyclic mastalgia during one menstrual cycle before the intervention vitamin E (9.1 ± 2.1), but the difference was significant during the first cycle (4.9 ± 1.5) and second cycle (1.5 ± 1.1) after the intervention. There was decreasing trend in pain severity score and remarkable improvement in the second cycle. Regimens containing vitamin E has an excellent improvement in reducing breast pain severity in cyclic mastalgia.

CONCLUSION

In our study 89.8% of the patients experienced cyclical mastalgia and 10.2% non cyclical mastalgia. The study was conducted in Guru Nanak Dev Hospital, Amritsar in department of general surgery. It included 500 patients of any age. Proper history and investigations of patients was done and following conclusion was made.

- Most of the patients were of cyclical mastalgia. They complaint increasing pain 1 week before menstrual period and relief after the menstrual period. These patients were reassured and prescribed pain killer and evening primose oil and were asked to use proper fitting brassiers.
- Around 51 patients in the study are of non cyclical mastalgia consisting of:
 - Breast abscess 12 cases, treated with pain killer antibiotics and incision and drainage.
 - Acute mastitis 10 cases treated with pain killer and antibiotics.
 - Patients who got trauma to the breast are 11 cases. The trauma included simple trivial injury and blow to the breast. Treated with pain killer and hot fomentation.
 - TB breast is rare but 2 cases were found they were given pain killer and antitubercular drugs 9-12 months.
 - 12 patients had engorged breast which was painful. Reassured and painkiller were given. All the patients were asked to breast feed their babies.
 - 4 lactating mothers were found to have infected galactocoele.
 - All the patients of mastalgia were asked to use proper fitting brassier.

REFERENCES

1. Ernster VL, Mason L, Goodson WH III, Sickles EA, Sacks ST, et al. Effects of caffeine-free diet on benign breast disease: a randomized trial. *Surgery* 1982;91(3): 263-7.

2. Ader DN, South-Paul J, Adera T, Deuster PA. Cyclical mastalgia: prevalence and associated health and behavioral factors. *J Psychosom Obstet Gynaecol* 2001;22:71-6.
3. Khan SA, Apkarian AV. The Characteristics of cyclical and non-cyclical mastalgia: a prospective study using a modified McGill Pain Questionnaire. *Breast Cancer Res Treat.* 2002;75:147-57.
4. Preece PE, Mansel RE, Bolton PM, Hughes LE, Baum M, Gravelle IH. Clinical syndromes of mastalgia. *Lancet* 1976; 02(7987):670-3.
5. Y. Fan, X. Pei, Z. Liu, Z. Xia, D. Zhang, A. Song, et al. Effectiveness of external Sanjierupi Gao on mastalgia caused by mammary gland hyperplasia: a placebo controlled trial. *J Tradit Chin Med* 2013;33(5): 603-7.
6. Scurr J, Hedger W, Morris P, Brown N. The prevalence, severity, and impact of breast pain in the general population. *Breast J* 2014; 20(5):508-13.
7. Olawaiye A, Withiam-Leitch M, Danakas G, Kahn K. Mastalgia: a review of management. *The Journal of reproductive medicine*. 2005;50(12):933-9.
8. Makumbi T, Galukande M, Gakwaya A. Mastalgia: prevalence at a sub-saharan african tertiary hospital. *Pain research and treatment* 2014;1-3.
9. Zarshenas M, Zhao, Pooranian, Binns CW, Scott JA. Incidence and risk factor of mastitis in shiraz, iran: result of Cohort study. 2017;12:290-6.
10. Amir LH, Forster D, McLachlan H, Lumley J. Incidence of breast abscess in lactating women: report from an Australian cohort. *BJOG: An International Journal of Obstetrics & Gynaecology*. 2004;111(12):1378-81.
11. Vaziri F, ZamaniLari M, Samsami Dehaghani A, Salehi M, Sadeghpour H, Akbarzadeh M, et al. Comparing the effects of dietary flaxseed and omega-3 Fatty acids supplement on cyclical mastalgia in Iranian women: a randomized clinical trial. *Int J Fam Med* 2014;1-7.
12. Jain BK, Bansal A, Choudhary D, Garg PK, Mohanty D. Centchroman vs tamoxifen for regression of mastalgia: A randomized controlled trial. *International Journal of Surgery*. 2015;15:11-6.
13. Raghunath S, Raghuram N, Ravi S, Ram NC, Ram A. Prevalence of mastalgia in young Indian females. *J Health Res Rev* 2015;2:108-11.
14. Gupta P, Verma V, Gupta R, Kumar A, Singh SP, Gupta UK et al. Role of tamoxifen and danazol in mastalgia: prospective controlled trial. *Int Surg J* 2016;3:553-6.
15. Mishra R.P, Chandra A, Singh A.K, Bulla V, Ahmad AI, Gupta S. Surgery Role of Vitamin E in Improving Pain Severity in Cyclical Mastalgia in Adolescent Women: A prospective Study. *IOSR-JDMS* 2016;4:29-33.

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